ELSEVIER

Volume 50, Numbers 1–4, March 1995

Journal of
Materials
Processing
Technology

Contents

Development and application of sheet-forming simulation 1
D. Zhou, R.H. Wagoner (Ohio, USA)

NUMISTAMP: a research project for assessment of finite-element models for stamping processes 17
E. Oñate, J. Rojek, C.G. Garino (Barcelona, Spain)

Comparative investigation into implicit, explicit, and iterative implicit/explicit schemes for the simulation of sheet-metal forming processes 39
D.Y. Yang, D.W. Jung, I.S. Song, D.J. Yoo (Taejon, South Korea) J.H. Lee (Ulsan, South Korea)

Quasi-static implicit and transient explicit analyses of sheet-metal forming using a C^0 three-node shell element 54
J.C. Gelin, L. Boulmane, P. Boisse (Besancon, France)

Calembour: an implicit method based on an enriched kinematical thin-plate model for sheet-metal forming simulation 70
H.B. Dhia, D. Durville (Chatenay-Malabry Cedex, France)

Simulation of square-cup deep-drawing with different finite elements 81
L. Kaiping, A.M. Habraken, (Liege, Belgium) H. Bruneel (Zelzate, Belgium)

Simulation of square-cup deep-drawing with various friction and material models 92
J. Ronda, C.D. Mercer, A.S. Bothma, G.J. Oliver and K.W. Colville (Rondebosch, South Africa)

Shell-element formulation in the static explicit FEM code for the simulation of sheet stamping . 105
M. Kawka, A. Makinouchi (Saitama, Japan)

Sheet forming process characterization by static-explicit anisotropic elastic–plastic finite-element simulation 116
E. Nakamachi (Osaka, Japan)

Modelling and simulation of the can-making process using solid finite elements 133
C. Teodosiu, J.-L. Duval (Villetaneuse, France) D. Daniel, (Voreppe, France), H.-L. Cao, (Metz Cedex, France)

Improved simulation of thin-sheet metalforming using LS-DYNA3D on parallel computers . . . 144
J.O. Hallquist, B. Wainscott, (Livermore, USA) K. Schweizerhof (Ebersberg, Germany)

Shell-element formulations in LS-DYNA3D: their use in the modelling of sheet-metal forming . 158
P.C. Galbraith, (Ontario, Canada) J.O. Hallquist (Livermore, USA)

Numerical simulations of sheet-metal forming 168
L. Taylor, J. Cao, A.P. Karafillis, (Pawtucket, USA) M.C. Boyce (Cambridge, USA)

Evaluation of the dynamic explicit/elastoviscoplastic finite-element method in sheet-forming simulation 180
T. Huo, E. Nakamachi (Osaka, Japan)

Elsevier Science S.A.

Prediction of necking and wrinkling in sheet-metal forming 197
E. Doege, T. El-Dsoki, D. Seibert (Hannover, Germany)

Generalization of Hill's 1979 anisotropic yield criteria 207
E. Chu (PA, USA)

Determination of constitutive parameters by forming-limit tests 216
M. Goya, K. Miyagi, (Okinawa, Japan) K. Ito, (Miyagi, Japan) H. Takahashi, (Yamagata, Japan)

Forming-limit analysis of hemispherical-punch stretching using the three-dimensional finite-element method 226
T. Yoshida, T. Katayama, M. Usuda (Tokyo, Japan)

A simplified triangular shell element with a necking criterion for 3-D sheet-forming analysis . . . 238
M. Brunet and F. Sabourin (Villeurbanne, France)

A phenomenological model for frictional contact of coated steel sheets 252
E.A. de Souza Neto, K. Hashimoto, Djordje Perić, D.R.J. Owen (Swansea, UK)

Finite-element simulation of sheet-forming processes with the help of contact elements on small-scale workstations 264
P.T. Vreede, B.D. Carleer, M.F.M. Louwes, J. Huétink (Netherlands)

Contact strategies to deal with different tool descriptions in static explicit FEM for 3-D sheet metal forming simulation 277
A. Santos, A. Makinouchi (Saitama, Japan)

Optimization of sheet-metal forming processes using the special-purpose program AUTOFORM 292
W. Kubli, J. Reissner (Zurich, Switzerland)

Closed-loop control of the blank-holder force in deep-drawing: finite-element modeling of its effects and advantages 306
M. Traversin, R. Kergen (Liege, Belgium)

Application of laser stereolithography in FE sheet-metal forming simulation 318
T. Nakagawa, (Tokyo, Japan) A. Makinouchi, J. Wei, T. Shimizu (Japan)

Modelling of part shape and deformation evolution in the conventional forming of large sheet-metal components 324
M.P. Sklad (Ontario, Canada)

Improvements in finite-element simulation for stamping and application to the forming of laser-welded blanks 335
N. Iwata, M. Matsui, N. Nakagawa, S. Ikura (Aichi, Japan)

Mathematical modelling as a means to bridge the gap between material and tooling 348
K.-V. von Schöning, R. Sünkel, M. Hillmann, K.W. Blümel, A. Wülfing (Germany)

Prediction of spring-back and side-wall curl in 2-D draw bending 361
F. Pourboghrat, E. Chu (PA, USA)

Experimental investigation of a square-cup deep-drawing process 375
J. Danckert (Aalborg, Denmark)

A better sheet-formability test 385
K. Narasimhan, (Bombay, India) M.P. Miles (Sophia Antipolis, France) R.H. Wagoner (Ohio, USA)

Use of a coupled explicit–implicit solver for calculating spring-back in automotive body panels . 395
M.J. Finn, P.C. Galbraith, L. Wu, (Ontario, Canada) J.O. Hallquist, L. Lum, T.-L. Lin (California, USA)

Author index 413